



Glenda Ritz, NBCT

Indiana Superintendent of Public Instruction

3-5 Mathematics Resources to Extend and Enrich the Core Curriculum Appropriate for High Ability Students Indiana Academic Standard Strand:

Computation

Resource	Annotation	Differentiation Tip(s)	Correlating Indiana Academic Strand Standards	Correlating Indiana Academic Process Standards
<p>Cook, M. Percentage Tiles II. Balboa Island, CA: Marcy Cook Math. www.marcycookmath.com</p> <p><i>Also found in: Number Sense</i></p>	<p>Using each digit, 0-9, once and only once for each challenge task, students solve the three following types of percentage problems:</p> <ol style="list-style-type: none"> 1. What is 50% of 90? 2. 45 is what percent of 90? 3. 50% of what is 45? <p>There are 20 increasingly difficult task cards in the set.</p>	<p>Self-Pacing: Students can progress through the 20 cards in each set/title at their own pace, keeping track of their progress and moving through the cards as far as they are able.</p> <p>Choice: Provide students all 20 cards in the set. Allow them to choose a certain number of cards they would like to complete, explaining that the cards from number 1 to 20 are progressively more</p>	<p>4.C.2; 4.C.4; 4.C.7</p> <p>5.C.1; 5.C.8</p>	<p>PS.1; PS.2; PS.3; PS.4; PS.5; PS.6; PS.7; PS.8</p>

		difficult.		
DynaMath. dynamath.scholastic.com	<i>DynaMath</i> is a monthly magazine that provides upper-elementary students with challenging and engaging real-world math applications to extend and enrich the core curriculum.	<i>Flexible Grouping:</i> Assign like-ability partners or small groups to collaboratively explore and work through the magazine activities.	* varies with monthly issues	* varies with monthly issues
Gavin, M.K. et al. (2007) <i>(Project M3: Mentoring Mathematical Minds) Factors, Multiples, and Leftovers: Linking Multiplication and Division.</i> Dubuque, IA: Kendall/Hunt Publishing Co. (ISBN: 978-0-7575-3296-2)	In this supplemental unit, students develop a deeper sense of numbers as they focus on multiplication and division, moving beyond computation to a conceptual understanding of the operations. The culminating activity of the unit is a Jeopardy-style game. A Teacher Guide, Student Mathematician's Journal, Hint Cards, and Think Beyond Cards are available. The unit is intended for fourth grade and takes approximately 33 50-minute class sessions or 6 weeks to complete. Hint Cards support students who need more practice or additional instruction with	<i>Tiered Delivery:</i> Utilize the unit's Hint Cards and Think Beyond Cards.	4.C.1; 4.C.2; 4.C.3; 4.C.4; 4.C.7	PS.1; PS.2; PS.3; PS.4; PS.5; PS.6; PS.7; PS.8

	skills or concepts, and Think Beyond Cards challenge students who have demonstrated mastery and are ready for an increased challenge.			
<p>VandeCreek, B. (2000) <i>Math Rules! 3rd-4th.</i> Marion, IL: Pieces of Learning. www.piecesoflearning.com (ISBN: 978-1-880505-80-9) <i>Also found in:</i></p> <ul style="list-style-type: none"> • <i>Algebraic Thinking</i> • <i>Geometry</i> • <i>Measurement</i> • <i>Data Analysis/Data Analysis and Statistics</i> • <i>Number Sense</i> 	<p>This reproducible resource provides a year's worth of weekly 8-problem enrichment challenge worksheets for both third and fourth grade. The variety of problems covers standards from all content strands. These worksheets are ideal for homework use.</p>	<p><i>Tiered delivery:</i> Match the grade level resource most appropriate to the readiness level of students. This resource is available for grades 1-6.</p>	<p>3.C.1; 3.C.2; 3.C.3; 3.C.4; 3.C.5; 3.C.6</p> <p>4.C.1; 4.C.2; 4.C.3; 4.C.4; 4.C.5; 4.C.6; 4.C.7</p>	<p>PS.1; PS.2; PS.3; PS.4; PS.5; PS.6; PS.7; PS.8</p>
<p>VandeCreek, B. (2000) <i>Math Rules! 5th-6th.</i> Marion, IL: Pieces of Learning. www.piecesoflearning.com (ISBN: 978-1-880505-81-6)</p>	<p>This reproducible resource provides a year's worth of weekly 8-problem enrichment challenge worksheets for both fifth and sixth grade. The variety of problems covers standards from all content</p>	<p><i>Tiered delivery:</i> Match the grade level resource most appropriate to the readiness level of students. This resource is available for grades 1-6.</p>	<p>4.C.1; 4.C.2; 4.C.3; 4.C.4; 4.C.5; 4.C.6; 4.C.7</p> <p>5.C.1; 5.C.2;</p>	<p>PS.1; PS.2; PS.3; PS.4; PS.5; PS.6; PS.7; PS.8</p>

<p><i>Also found in:</i></p> <ul style="list-style-type: none"> • <i>Algebraic Thinking</i> • <i>Geometry</i> • <i>Measurement</i> • <i>Data Analysis/Data Analysis and Statistics</i> • <i>Number Sense</i> 	<p>strands. These worksheets are ideal for homework use.</p>		<p>5.C.3; 5.C.4; 5.C.5; 5.C.6; 5.C.7; 5.C.8; 5.C.9</p>	
<p>Zaccaro, E. (2014) <i>Upper Elementary Challenge Math</i>. Bellevue, IA: Hickory Grove Press. www.challengemath.com (ISBN: 978-0-9854725-2-8)</p> <p><i>Also found in:</i></p> <ul style="list-style-type: none"> • <i>Algebraic Thinking</i> • <i>Measurement</i> • <i>Number Sense</i> 	<p>In this resource, “problem sets” follow an introduction meant for instruction. Each “problem set” presents a single problem type in increasingly complex steps. “Problem sets” are followed by a page of problem challenges on the same topic at the following four challenge levels:</p> <ul style="list-style-type: none"> • Level 1 (Easy) • Level 2 (Somewhat Challenging) • Level 3 (Challenging) • Genius Level (Very Challenging) <p>Topics covered include: astronomy, problem solving, decimals, money, fractions,</p>	<p><i>Tiered Delivery:</i> Following the whole-class introduction to a specific type of problem, students can complete the appropriately leveled follow-up challenges independently or with a like-ability partner, choosing from one of the four difficulty levels.</p>	<p>3.C.1; 3.C.2; 3.C.3; 3.C.4; 3.C.5; 3.C.6</p> <p>4.C.1; 4.C.2; 4.C.3; 4.C.4; 4.C.5; 4.C.6; 4.C.7</p> <p>5.C.1; 5.C.2; 5.C.3; 5.C.4; 5.C.5; 5.C.6; 5.C.7; 5.C.8; 5.C.9</p>	<p>PS.1; PS.2; PS.3; PS.4; PS.5; PS.6; PS.7; PS.8</p>

	percents, metric system, algebra, probability, ratios, perimeter and circumference, areas, volumes, and bases.			
--	---	--	--	--